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Dumont M. Jones

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EXAMINER

LOVEL, KIMBERLY M

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/706,352	<b>Applicant(s)</b> JONES ET AL.	
	<b>Examiner</b> Kimberly Lovel	<b>Art Unit</b> 2167	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-5 and 7-22 is/are rejected.
- 7) ☐ Claim(s) 6,23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This communication is responsive to the Amendment filed 21 February 2007.
2. Claims 1-24 are pending in this application. Claims 1, 13 and 22 are independent. In the Amendment filed 21 February 2007, claims 4, 8, 13 and 22-24 have been amended. This action is made Non-Final.

### ***Affidavits***

#### ***Declaration under 37 C.F.R. § 1.132***

3. Applicant's arguments with respect to the declaration have been considered as noted below in detail.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,778,995 to Gallivan (hereafter Gallivan) in view of US Patent No 7,085,755 to Bluhm et al (hereafter Bluhm) in view of US PGPub 2005/0086238 to Nevin, III (hereafter Nevin).**

**Referring to claim 1**, Gallivan discloses a method for evaluating the text content of a document database with respect to a document population (see abstract), comprising the steps of:

(a) providing a computer system [individual computer systems] having a user interface with a display (see column 5, lines 10-17);

(b) gathering documents from said database into said system (see column 4, lines 47-60);

(c) normalizing said gathered documents (see column 6, lines 48-53);

(e) determining [generating] a text criteria [themes or concepts] with respect to said document population (see column 7, lines 5-14); and

(f) forming a net comprising at least two nodes associated by at least one interaction and displayable at said display as two or more spaced apart nodes connected by an interaction (see Fig 14; column 9, line 53 – column 10, line 18).

However, while Gallivan discloses the method including the limitations of (a)-(c) and (e)-(f), Gallivan fails to explicitly teach the further limitations of (d) and (g)-(k).

Bluhm discloses managing a large corpus of documents (see abstract), including the further limitation of (d) fingerprinting said gathered documents (see column 26, line 8 – column 27, line 14).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the step of fingerprinting the documents as disclosed by Bluhm with the steps disclosed by Gallivan for pre-processing the documents. One would have

been motivated to do so in order to improve the accuracy of determining the interaction of concepts.

However, while the combination of Gallivan and Bluhm (hereafter Gallivan/Bluhm) discloses the method including the limitations of (a)-(f), Gallivan fails to explicitly teach the further limitations of (g)-(k). Nevin discloses forming a net comprising at least two nodes associated by at least one interaction and displayable at said display as two or more spaced apart nodes connected by an interaction (see Fig 1), including the further limitations of:

(g) loading said text criteria into at least one of said nodes (see [0081] – data is stored in the nodes);

(h) for each document of said database, calculating its geometric relative distance from a said node to derive one or more node attractors (see [0031] and [0185] – the connection strength of the link from one node to another is considered to represent the *relative distance*);

(i) displaying said net at said display in combination with one or more document symbols each representing a said document located in correspondence with said calculated relative distance (see [0033]; [0084]; and Fig 2);

(j) visually examining the display of said net and document symbols (see [0084], lines 14-17); and

(k) determining from said document symbol locations at said display those documents, if any, which are more likely to correspond with said text criteria (see [0313] and [0315] – the user determines which categories are considered to be good or bad).

It would have been obvious to one of ordinary skill at the time the invention was made to utilize Nevin's method for displaying documents to a user in the form of nodes to display the documents of Gallivan/Bluhm, which have been gathered, normalized, fingerprinted and categorized. One would have been motivated to do so to provide a more accurate method displaying search results.

**Referring to claim 2**, the combination of Gallivan/Bluhm and Nevin (hereafter Gallivan/Bluhm/Nevin) discloses the method of claim 1 in which:

said step (f) forming a net provides for the display of said net as having said nodes defined as circles and said interaction defined as a line extending between said circles [each cluster has a center  $c$  and a radius  $r$ ; each radius extends to the common origin; two clusters are connected by their radius and the common origin] (Gallivan: see Fig 14 and column 9, lines 53-60).

**Referring to claim 3**, Gallivan/Bluhm/Nevin discloses the method of claim 1 in which:

said step (g) loads said text criteria into a positive designated one of said nodes (Nevin: see [0031] and [0083], lines 4-14 – data is stored in the nodes; a node can have a positive position).

**Referring to claim 4**, Gallivan/Bluhm/Nevin discloses the method of claim 1 in which:

said step (f) forms said net as comprising a said positive designated node and a null designated node connected by a said interaction (Nevin: see [0083]; [0084], lines 4-

Art Unit: 2167

14; [0123] – the last node is used as the null node; the nodes are connected by lines to demonstrate an interaction).

**Referring to claim 5**, Gallivan/Bluhm/Nevin discloses the method of claim 1 in which:

said step (e) determines said text criteria as criteria document textual material (Bluhm: see column 6, lines 33-47); and

said step (g) comprises the steps:

(g1) normalizing said criteria document textual material (Bluhm: see column 22, lines 40-44); and

(g2) fingerprinting the normalized criteria document textual material (Bluhm: see column 26, line 8 – column 27, line 14).

**Referring to claim 7**, Gallivan/Bluhm/Nevin discloses the method of claim 1 in which:

said step (i) displays said one or more document symbols as squares (Nevin: see Fig 8 – examples of the documents include Glazing\_Techniques, Acrylics, Frescoes, Secular\_Images, Food and Oils).

**Referring to claim 8**, Gallivan/Bluhm/Nevin discloses the method of claim 1 including the steps:

(l) retrieving the identification of those documents resulting from the determination of step (k) (Nevin: see [0313] and [0315]);

(m) viewing one or more of the documents identified in step (l) and determining the quality of the match thereof with said step (e) text criteria (Nevin: see [0313] and [0315]).

**Referring to claim 9**, Gallivan/Bluhm/Nevin discloses the method of claim 8 further comprising the steps:

(n) identifying a new text criteria as a result of a said step (m) determination of an insufficient said quality of said match (Nevin: see [0313] and [0315]);

(o) adding the identified new text criteria to the step (g) text criteria loaded into said positive designated one of said nodes (Nevin: see [0313] and [0315]); and

(p) reiterating said steps (h) through (m) (Nevin: see [0313] and [0315]).

**Referring to claim 10**, Gallivan/Bluhm/Nevin discloses the method of claim 8 further comprising the steps:

(q) subsequent to said step (m), identifying and viewing at said display a list of features common to those documents the identification of which was retrieved in step (l) (Nevin: see [0313]-[0316]);

(r) identifying a new text criteria in correspondence with said step (q) identification and viewing at said display of said features common to those documents the identification of which was retrieved in step (l) (Nevin: see [0313]-[0316]);

(s) adding the identified new text criteria to the step (q) text criteria loaded into said positive designated one of said nodes (Nevin: see [0313]-[0316]); and

(t) reiterating said steps (h) through step (m) (Nevin: see [0313]-[0316]).



**Referring to claim 11**, Gallivan/Bluhm/Nevin discloses the method of claim 1 in which:

said step (k) further comprises the steps:

(k1) determining additional text criteria where said document symbol locations are not likely to correspond with said text criteria determined at step (e) (Nevin: see [0313]-[0316]); and

(k2) adding said additional text criteria to said text criteria determined at said step (e) (Nevin: see [0313]-[0316]).

**Referring to claim 12**, Gallivan/Bluhm/Nevin discloses the method of claim 8 in which:

said step (l) is carried out by drawing at said display of said net a boundary defining a region of said symbols (Nevin: see [0320] – the boundary region is determined by the available screen space).

**6. Claims 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 7,085,755 to Bluhm et al (hereafter Bluhm) in view of US PGPub 2005/0086238 to Nevin, III (hereafter Nevin).**

**Referring to claim 13**, Bluhm discloses a method for evaluating the text content of a document database with respect to a population of documents (see abstract) comprising the steps of:

(a) providing a computer system having a user interface with a display (see column 29, lines 25-36);

(f) selecting a said document attribute to be correlated and the criteria for establishing an attribute value match (see column 6, lines 33-47);

(g) determining the presence of one or more document attribute value match pairs as correlations between said first and second regions (see column 6, lines 33-47).

However, while Bluhm discloses the method including the limitations (a), (f) and (g), Bluhm fails to explicitly teach the further limitations of (b)-(e) and (h).

Nevin discloses a method of displaying and storing data in linked nodes (see abstract), including the further limitations of:

(b) forming one or more nets each comprising at least two nodes associated by at least one interaction (see Fig 1), one or more said nodes representing an evaluation criteria (see [0081] – the data is stored in the nodes), said one or more nets being viewable at said display (see Fig 1);

(c) treating said documents to have an attribute value and calculating for each document a geometric relative distance with respect to a said node criteria and displaying corresponding document symbols at said display (see [0031] and [0185] – the connection strength of the link from one node to another is considered to represent the *relative distance*);

(d) delimiting at said display a first region of said document symbols (see [0031] and Fig 1 – linking the nodes together is considered to represent *delimiting*; the connection of Node 1 to Node 2 is considered to represent a first region);

(e) delimiting at said display a second region of said document symbols (see [0031] and Fig 1 – linking the nodes together is considered to represent *delimiting*; the connection of Node 2 to Node 3 is considered to represent a second region);

(h) displaying said correlations at said display (see [0033] – the display of nodes based on a location calculated from force parameters is considered to represent *displaying correlations*).

It would have been obvious to one of ordinary skill at the time the invention was made to utilize Nevin's method for displaying documents to a user in the form of nodes to display the gathered documents of Bluhm. One would have been motivated to do so to provide a more accurate method displaying search results.

**Referring to claim 14**, Bluhm/Nevin discloses the method of claim 13 in which:  
said step (d) provides a said first region extending over more than one said net (Nevin: see [0031] and Fig 1); and  
includes the step:

(d1) mapping said first region to a first document set by selecting the union or intersection of documents on different nets (Nevin: see [0031] and Fig 1).

**Referring to claim 15**, Bluhm/Nevin discloses the method of claim 13 in which:  
said step (e) provides a said second region extending over more than one said net (Nevin: see [0031] and Fig 1); and  
including the step:

(e1) mapping said second region to a second document set by selecting the union or intersection of documents on different nets (Nevin: see [0031] and Fig 1).

**Referring to claim 16**, Bluhm/Nevin discloses the method of claim 13 in which: said step (f) selects said criteria for establishing an attribute value match by defining an attribute value tolerance (Bluhm: see column 6, lines 33-47).

**Referring to claim 17**, Bluhm/Nevin discloses the method of claim 16 in which: said step (g) determines the presence of a document attribute match pair by determining whether the attribute value of a document in said first region is equal to the attribute value of a document in said second region within said attribute value tolerance (Bluhm: see column 6, lines 33-47).

**Referring to claim 18**, Bluhm/Nevin discloses the method of claim 13 in which: said step (d) is carried out by providing a computer generated line or lines visible at said display (Nevin: see [0083]).

**Referring to claim 19**, Bluhm/Nevin discloses the method of claim 13 in which: said step (e) is carried out by providing a computer generated line or lines visible at said display (Nevin: see [0083]).

**Referring to claim 20**, Bluhm/Nevin discloses the method of claim 13 in which: said step (h) is carried out by providing visible line at said display connecting two said symbols and representing said correlation (Nevin: see [0083]).

**Referring to claim 21**, Bluhm/Nevin discloses the method of claim 13 in which:

said step (f) selects said document attribute or document identification see (Nevin: [0093], lines 4-7); and

said step (g) identifies the same document in each said first and second region as a said correlation (Nevin: see [0094]).

**7. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2004/0078366 to Crooks et al (hereafter Crooks et al) in view of US PGPub 2005/0086238 to Nevin, III.**

**Referring to claim 22, Crooks et al discloses**

(a) providing a computer system having a user interface with a display (see [0020]);

(b) identifying the population of documents to be searched (see [0022] – searching the database);

(c) normalizing the documents of the identified population (see [0023], lines 7-9 – normalizing the documents located in the database) with the steps comprising;

(c1) selecting character sequences that will separate words (see [0024], lines 65-70),

(c2) determining to either retain or eliminate punctuation characters (see [0024], lines 28-67),

(c3) setting regular expressions that will characterize numbers (see [0024], lines 1-28),

(c4) setting case behavior (see [0023], lines 2-10),

(c5) setting an offset and factor for numeric class (see [0024], lines 1-28),  
(c6) converting a document of said identified population to a character  
(see [0023], lines 17-18) sequence,

(c7) accessing the words, or punctuation characters, W of said character  
sequences (see [0024], lines 1-28),

(c8) for each accessed W which is a number, converting such number into  
a sequence of word numbers, WN, and normalizing said word numbers for  
fingerprinting (see [0024], lines 1-28),

(c9) marking the position and length of each W or normalized word  
number WN (see [0026], lines 31 seq.),

(c10) for each W or normalized WN, completing said normalization by  
reiterating steps (c8) and (c9) (see [0026], lines 10-12 – refining is considered to  
represent repeating);

(d) fingerprinting said normalized documents (see [0024]-[0026]).

However, while Crooks et al disclose the method including limitations (a)-(c10),  
Crooks et al fail to explicitly teach the further limitations of (e)-(g).

Nevin discloses a method of displaying and storing data linked by nodes (see  
abstract), including the further limitations of:

(e) forming one or more nets, each comprising at least two nodes, one or more  
said nodes representing an evaluation criteria, said one or more nets exhibiting two or  
more spaced apart nodes connected by one or more interactions (see Fig 1);

(f) for each normalized document, calculating its geometric relative distance from a said node (see [0031] and [0185] – the connection strength of the link from one node to another is considered to represent the *relative distance*);

(g) displaying said one or more nets at said display in combination with one or more document symbols representing a said document located in correspondence with said calculated relative distance (see [0033]; [0084]; and Fig 2); and

determining from said document symbol locations at said display, if any, those documents which are more likely to correspond with said evaluation criteria (see [0313] and [0315] – the user determines which categories are considered to be bad or good).

It would have been obvious to one of ordinary skill at the time the invention was made to utilize Nevin's method for displaying documents to a user in the form of nodes to display the normalized documents of Crooks et al. One would have been motivated to do so to provide a better method for interfacing with in a manner that is user friendly for a physician (Crooks et al: see [0005]).

#### ***Allowable Subject Matter***

8. Claims 6, 23 and 24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

9. Applicant's arguments with respect to claim 1, sections a-c and e-f have been considered but are moot in view of the new ground(s) of rejection.

10. The examiner considers the prior art to be relevant to claims 3 and 4, for the reasons explained in claim 1.

11. The examiner considers the prior art to be relevant to claims 7-12, for the reasons explained in claim 1.

12. The examiner considers the prior art to be relevant to claims 14-21 , for the reasons explained in claim 1.

13. Applicant's arguments with respect to claims 13 and 22 have been considered but are moot in view of the new ground(s) of rejection.

14. Concerning the independent claims, the arguments seem to be directed towards the concept that the steps provide for the development of a search question. When interpreting the claim language in the broadest sense, it can be seen that the limitations provide a search result as noted in (i) and further how steps (l) and (m) of claim 8 relate to allow the user to visually interact with the search results. However, it is unclear how the claim limitations relate to developing a search question.



**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimberly Lovel  
Examiner  
Art Unit 2167

11 November 2006  
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